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in the parts to which it is attached, it is almost impossible to do it injury. My carriages, therefore, are sufficiently elastic to accommodate to the concussion, and yet stiff enough to recover. The elasticity throughout is also much more pleasant than that of steel; as I have observed that steel springs, if they are made so inflexible as to carry much weight, they recover after bending so quick that the person riding is nearly and in many instances thrown out of the carriage. Indeed, it is to this that such misfortunes must be attributed, and not to the first shock the carriage receives; I mean the recoiling of the spring occasions the jerk. Whalebone, from its being more pliant, does not recoil so quick, but simply dips, and recovers, something like the motion of a boat on the water. Indeed, the wheels going into a deep rut, or over a large stone, is scarcely felt by the person in the carriage. It is literally impossible to break the springs. I make my wheels upright; that is without dishing, as it is termed, or being set in at the bottom. It is not necessary for me to give my reasons for this, as, from the attention many gentlemen have lately paid to mechanics, they are able to see that wheels set in at the bottom, or in an oblique direction, naturally describe a circular rout when in motion, and consequently would run from each other were they not confined; the friction is therefore very considerably increased, particularly on the circumference of the wheels, and the strain on the axle much greater. On the contrary, if the wheels are upright, they run together, and in a straight line.

I have driven my carriage, a one horse chaise, about eight months, and have in the course of that time performed upwards of five thousand miles, nor has it been necessary to repair it. I should observe also, that carriages made of whalebone are much lighter, and incalculably stronger than any other.

Specification of the Patent granted to John Kershaw, of Glossop Dale, in the County of Derby, Cotton Spinner, and John Wood, of the same place, Gentleman; for a mode of preparing Flax for the purpose of being spun on the like Machinery as Cotton.

That in compliance with the said proviso, we the said John Kershaw and John Wood do hereby declare that the nature of our said invention is described in manner following; that is to say: Our said invention, in preparing flax for the purpose of being spun on the like machinery as cotton, consists in separating the fibres of the flax from each other by bleaching the flax, and by afterwards either passing it between rollers, pressed together with force sufficient to separate such of the fibres of the flax as have not been sufficiently separated by the process of bleaching or beating it with hammers or beetles, or by other modes of percussion sufficient to effect the same purpose.

The mere process of bleaching flax (which we disclaim as our invention) is well known, and it is unnecessary here to specify it.

Although the flax may, for the purpose of our invention, be bleached in its raw state, or in any other state prior to its being finally carded, we prefer the following mode. We form it with the heckle into strickles, and then rove it on a common flax-rover into soft cord, containing about ten ounces in weight, for every one hundred and twenty yards in length. And after forming such rovings into hanks we bleach it, and pass it when bleached through the rollers above described as often as may be necessary to separate the fibres. We then card it, draw it, and rove it like cotton, and afterwards spin it.

The rollers to be used in separating the fibres of the flax from each other may be made of any convenient diameter and length, and of any materials hard enough to effect the above purpose; but we usuallly make one of such rollers of close-grained, well-seasoned wood, and the other of iron, of about seven inches each in diameter, and about three inches each in length, and press them together with a weight of fifty-six pounds at each end of the upper roller; and we usually pass the flax twice, or oftener, through six successive sets of rollers, until the fibres are sufficiently separated. But if the bleaching be imperfect, or if the fibres of the flax, from any other circumstance, have an unusual degree of adherence, we continue the process until the fibres are sufficiently separated. The separation may be ascertained by inspection.

Although we have described other parts of the process of preparing flax for the purpose of being spun on the like machinery as cotton, we disclaim as our invention every part of the process except that of separating the fibres of the flax from each other by bleaching it, and by afterwards either passing it between rollers pressed together with force sufficient to separate such of the fibres of the flax as have not been sufficiently separated by the process of bleaching, or beating it with hammers, or beetles, or by other modes of percussion sufficient to effect the same purpose.

Observations communicated by the Patentees.

Such is the enrolled specification of our invention; the design of which it may not be amiss thus briefly to explain.

The flax-machinery hitherto used being found inadequate to any but the coarsest yarns, the finer numbers have been consequently confined to hand-spinning, an operation in itself so tedious and expensive that the cost of any fabric dependent on it must necessarily be much enhanced; and hence chiefly the high price of linen, cambric, and lace, when compared with articles of equal texture made from cotton, or even silk, the raw material of which exceeds in value that of flax fifty fold.

To preclude, therefore, the necessity of hand-spinning in the higher numbers, of flax, by adapting the article to the like machinery as cotton, is the object of the process above specified; and, in effecting this purpose, it is hoped that the foundation of a manufacture has been laid, which may enable this country, at no distant period, to meet the French in a market, hitherto their own, that of laces, lawn, and cambric.

Specification of the Patent granted to William Parker, of Whitechapel, in the County of Middlesex, Oil and Colourman; for an Improvement in the making or manufacturing of Green Paint.

That in compliance with the said proviso, I the said William Parker do hereby declare that my said invention consists in combining fixed alkali with mineral oxyd and precipitate of copper, and thereby producing a permanent pea-green colour, for house and ship painting, and is not liable to decomposition by salt water, which I prepare in the following manner; that is to say: take fourteen ounces of crude potash, fourteen drachms of crude white arsenic, and boil them in two gallons of soft water, until quite dissolved; then put the liquor into a cast-iron vessel to cool and settle; draw off the liquor clear from the sediment, and put it into a vessel that will hold twenty gallons; add to it six gallons of clear soft water, cold; take one pound of Roman vitriol, and boil it in two gallons of soft water till dissolved; put the solution into an open vessel till quite cold, then to be added gradually to the aforesaid solution of fixed alkali, stirring it well all the time, which will produce a genuine green oxyd, then to proceed in the usual way of mineral green. A most essential part of this preparation is to make the mineral green without using caustic alkali, which is the general way of manufacturing it for this purpose: the caustic alkali acts so powerfully on the vegetable quality of linseed oil used in this preparation, and thereby rendering it mucilaginous.

Preparation of precipitate of copper to mix with the aforesaid oxyd; viz. take one pound of Roman vitriol, and boil it till dissolved in two gallons of soft water, at the same time dissolve in another vessel half a pound of the first soft American pearlash; put the solution of vitriol, boiling hot, into a vessel that will hold ten or twelve gallons; then add to it gradually the solution of pearlash, boiling hot; to be well stirred all the time. On mixing the solution together it will cause a strong effervescence; if the pearlash is good it will be enough to precipitate the vitriol, which will be known by the effervescence immediately subsiding, and the precipitate falling to the bottom of the vessel, and thereby producing a fine green colour; when settled, draw off the clear liquor; then put it into bags made of canvas, to filter; and when well drained, to be laid on chalk stones, to draw a further quantity from it; then to be put into a stove to dry.

Preparation of mixing or combining with mineral substances in linseed oil: Take one pound of the genuine mineral green, prepared as herein described, to be well powdered; one pound of the precipitate of copper, one pound and a half of refiners' blue verditta, three pounds of white lead dry powdered, three ounces of sugar of lead, powdered fine; the whole of these ingredients to be mixed up in linseed oil, and ground in a levigating mill, passing it through until quite